

APPENDIX A
A COMPLETE SET OF PENDING CLAIMS

19. (As filed) A method for fabricating a dental appliance, said method comprising:

providing a digital data set representing a modified tooth arrangement for a patient;

controlling a fabrication machine based on the digital data set to produce a positive model of the modified tooth arrangement;

producing the dental appliance as a negative of the positive model;

applying a lubricious composition to the surface of the dental appliance.

20. (As filed) A method as in claim 19, wherein the controlling step comprises:

providing a volume of non-hardened polymeric resin;

scanning a laser to selectively harden the resin in a shape based on the digital data set to produce the positive model.

21. (As filed) A method as in claim 19, wherein the producing step comprises molding the appliance over the positive model.

22. (As filed) A method for fabricating a dental appliance, said method comprising:

providing a first digital data set representing a modified tooth arrangement for a patient;

producing a second digital data set from the first data set, wherein the second data set represents a negative model of the modified tooth arrangement;

controlling a fabrication machine based on the second digital data set to produce the dental appliance;

applying a lubricious composition to the surface of the dental appliance.

23. (As filed) A method as in claim 22, wherein the controlling step comprises selectively hardening a non-hardened resin to produce the appliance and separating the appliance from the remaining liquid resin.

24. (As filed) A method as in claim 22, wherein the appliance comprises a polymeric shell having a cavity shaped to receive and resiliently reposition teeth from an initial tooth arrangement to the modified tooth arrangement.

25. (As filed) A method as in claim 22, wherein the appliance is coated with a polar chemical to provide a hydrophilic surface.

26. (As filed) A method as in claim 25, wherein the chemical is one of hydrogels, 2-HEMA (2-hydroxy ethyl methacrylate), NVP (n-vinyl pyrrolidone), or acrylyamide, PEO (polyethylene oxide) at various molecular weights, PPO (polypropylene oxide), MA (methacrylic acid), and AA (acrylic acid).

27. (As filed) A method as in claim 22, wherein the appliance is coated with a non-polar chemical to provide a hydrophobic surface.

28. (As filed) A method as in claim 22, wherein the appliance is coated with an oily substance to provide a hydrophobic surface.

29. (As filed) A method as in claim 27, wherein the oily substance is either PTFE or silicone or mineral oil.

30. (As filed) A method as in claim 22, wherein the appliance is coated with a chemical to make its surface slippery.

31. (As filed) A method as in claim 22, wherein the appliance has a surface adapted to imbibe and hold a micromolecular layer of water to lubricate the lips or the side of the mouth.

32. (As filed) A method as in claim 22, wherein the composition is applied by a spraying operation.

33. (As filed) A method as in claim 22, wherein the composition is applied using an electro-static discharge and further comprising baking the appliance.

34. (As filed) A method as in claim 22, wherein the composition is applied by a dipping operation.

35. (As filed) A method as in claim 22, wherein the surface of the appliance is pretreated.

36. (As filed) A method as in claim 35, wherein the precoating treatment includes one or more of the following: corona discharging, acid etching or solvent etching.

37. (As filed) A method as in claim 35, wherein the precoating treatment includes one or more of the following: sanding, abrasing, tumbling and sand blasting.

38. (As filed) A method as in claim 22, wherein the surface of appliance can be modified using one or more of the following: coating, grafting, laminating and interpenetrating networks.